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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/731,522	12/06/2000	Vaughn S. Iverson	884.314US1	9567

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EXAMINER

CZEKAJ, DAVID J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/731,522	Applicant(s) IVERSON, VAUGHN S.	
	Examiner Dave Czekaj	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 06 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-38 have been considered but are moot in view of the new ground(s) of rejection.

Specification

1. The disclosure is objected to because of the following informalities:

On page 7, line 18, the examiner understood "user interface 128" to be "user interface 108".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1-9, 23-25, 27, 29, 39, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kossin (2002/0003584) in view of Zernov et al. (6097424), (hereinafter referred to as "Zernov").

Regarding claim 1, Kossin discloses an apparatus that is concerned with waterproof housings for digital electronic cameras (Kossin: paragraph 0003, lines 1-3). This apparatus comprises "a digital camera having an image-receiving lens and an image sensor, the image sensor designed to detect an

image from the lens" (Kossin: figure 1, paragraph 0109, wherein the lens and the sensor are the camera optics) and a "sealed case surrounding the digital camera, the case constructed and arranged for providing a water resistant enclosure for the camera and adapted for transmission of the image from the sensor to a display located external to the case without opening the case" (Kossin: figure 1, paragraph 0109, wherein the sealed case are the plastic encasings, paragraph 0110, wherein the case can withstand depths of 500 feet, paragraph 0126, wherein the PC is the display, the transmission is the RF link which allows the case to remain closed while transferring the image data). However, this apparatus lacks the case varying in thickness in areas where reinforcement is needed. Zernov teaches that prior art underwater camera systems are generally configured around off the shelf components resulting in a deterioration of operating performance. To help alleviate this problem, Zernov discloses an apparatus that comprises "a case varying in thickness in areas which reinforcement is needed" (Zernov: figures 3, and 8-9, wherein the reinforcement is ^{For the} ~~the~~ attachment to the device, items 18²⁰ or 39). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Kossin and add the varying case thickness taught by Zernov in order to obtain an apparatus that is more versatile by being able to strengthen the case depending on the environmental conditions for which the camera is to be used.

Regarding claim 2, Kossin discloses "the case is formed from two sections of material permanently bonded together" (Kossin: figure 1, wherein the two sections are items 121 and 12).

Regarding claim 3, Kossin discloses "the case is waterproof at depths less than about six meters" (Kossin: paragraph 0110, wherein the case is waterproof at depths up to 500 feet which would entail the case being waterproof at depths less than 6 meters).

Regarding claims 4 and 6, Kossin discloses "the case is pressure resistant at depths up to about 90 meters" (Kossin: paragraph 0110, wherein the case can withstand pressures at depths of 500 feet. The examiner notes that depths of 500 feet are equivalent to about 152 meters).

Regarding claim 5, Kossin discloses "the case is made form a polycarbonate resin material, wherein areas of the case are reinforced" (Kossin: paragraphs 0111, 0139, and 0141, wherein the reinforcement is the solidly encapsulated design which removes airspace allowing the case to withstand any depth of water).

Regarding claim 7, although not disclosed, it would have been obvious to make the case from an aluminum alloy (Official Notice). Doing so would have been obvious in order to provide more support to the camera housing.

Regarding claim 8, Kossin discloses "the non-optical internal airspace within the case is filled with a solid or liquid material" (Kossin: figure 1,

paragraph 0109, wherein the non-optical airspace is the area 13 which can be filled with a solid or liquid as disclosed).

Regarding claim 9, Kossin discloses "the internal airspace between the lens and image sensor is filled with an optically-neutral material" (Kossin: paragraph 0139, wherein the optically-neutral material is the clear casting resin).

Regarding claim 23, note the examiners rejection for claim 1 and in addition Kossin discloses "a transmission link for outputting images from the digital camera to a remote controller" (Kossin: paragraph 0126, wherein the transmission link is the RF link, the remote controller is the PC).

Regarding claim 24, Kossin discloses "the digital camera is a video camera" (Kossin: paragraph 0168).

Regarding claim 25, Kossin discloses "the remote controller is a personal computer" (Kossin: paragraph 0126, wherein the personal computer is the PC).

Regarding claim 27, Kossin discloses "the transmission link is a wireless link" (Kossin: paragraph 0121, wherein the wireless link is the IR link).

Regarding claim 29, Kossin discloses "recharging a battery system using an external power supply" (Kossin: figure 5, wherein the external power supply is the external charger).

Regarding claim 39, Zernov discloses "the areas in which reinforcement is needed comprise one of the corner areas of the case, areas of the case that cover fragile camera components, or areas of the case that cover protruding

camera components" (Zernov: figures 3, and 8-9, wherein the reinforcement is the attachment to the device, items 18 or 39, the corner is the corner area 20).

Regarding claim 44, Kossin discloses "the case is one continuous piece of material surrounding the camera" (Kossin: figure 1, wherein the housing (12) is shown to be continuous).

4. Claims 10-22, 26, and 30-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kossin (2002/0003584) in view of Takahashi et al. (5512941), (hereinafter referred to as "Takahashi").

Regarding claims 10 and 38, note the examiners rejection for claim 1, and in addition, Kossin discloses "a storage system powered by a battery system" (Kossin: figure 5, wherein the battery system is shown to be connected to the camera system which contains a memory or storage system). However, claim 10 differs from claim 1 in that claim 10 further requires a user interface communicating with the storage and battery systems and an internal display as claimed. Takahashi teaches that current underwater photographing systems make the user take their eye off a photograph in order to check water depth (Takahashi: column 1, lines 41-49). Takahashi further teaches that the user might forget to check the remaining air pressure in the tanks using the current systems (Takahashi: column 1, lines 50-59). To alleviate this problem Takahashi discloses an apparatus that provides a user interface indicating, on an internal display, the remaining air, battery, and amount of tape (Takahashi: column 4, lines 16-18 and 44-49). Therefore, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Kossin and add the user interface taught by Takahashi in order to obtain an apparatus that makes underwater photography safer by indicating vital statistics to the user.

Regarding claims 11 and 12, Kossin discloses "means for outputting the image comprises a wireless transmission link wherein the wireless link is an infrared link" (Kossin: paragraph 0121, wherein infrared link is the infrared PC interface link).

Regarding claim 13, although not disclosed, it would have been obvious to implement a high capacity integrated storage system (Official Notice). Doing so would have been obvious in order to more safely and efficiently store a large number of pictures.

Regarding claims 14 and 31, Kossin discloses "the storage system is rechargeable with an inductive charging mechanism" (Kossin: figure 5, wherein the storage system is contained within the camera which is shown to be connected to a charging mechanism).

Regarding claims 15, 33, and 36, although not disclosed, it would have been obvious to implement an interchangeable storage system (Official Notice). Doing so would have been obvious in order to easily transfer pictures from one location to another. One would be further motivated since it is well known in the art to do so.

Regarding claim 16, Kossin discloses "the battery system is a high capacity integrated battery system" (Kossin: paragraph 0132, wherein the battery can be charged without removing it making the battery an integrated part of the system).

Regarding claims 17, Kossin discloses "the battery system is rechargeable with an inductive charging mechanism" (Kossin: figure 5, paragraph 0132, wherein the inductive charging mechanism comprises the charger illustrated in figure 5).

Regarding claim 18, although not disclosed, it would have been obvious to make the battery system rechargeable using solar energy (Official Notice). Doing so would have been obvious in order to make the apparatus more energy efficient.

Regarding claims 19 and 34, although not disclosed, it would have been obvious to implement an interchangeable battery system (Official Notice). Doing so would have been obvious in order to easily replace "dead" or damaged batteries. One would be further motivated since it is well known in the art to do so.

Regarding claim 20, Takahashi discloses "the battery and storage systems are combined into a single unit located in a sealed case external to the camera case" (Takahashi: figure 6, wherein the battery and storage systems are contained in sealed case H, the single unit are the contents contained within the case H).

Regarding claims 21-22 and 37, although not disclosed, it would have been obvious to implement a rechargeable external strobe light to illuminate an area (Official Notice). Doing so would have been obvious in order to improve the picture quality of the apparatus by providing light in dark areas. One would be further motivated since it is well known in the art to do so.

Regarding claim 26, although not disclosed the remote controller could comprise a printer (Official Notice). Doing so would have been obvious to make the apparatus more efficient by being able to immediately print the images.

Regarding claims 30 and 32, Kossin discloses "the power supply is an inductive charging mechanism" (Kossin: figure 5, wherein the inductive charging mechanism comprises the charger illustrated in figure 5).

Regarding claim 35, Takahashi discloses "the battery system communicates the power status to the camera system" (Takahashi: column 4, lines 45-50). Although not disclosed, it would have been obvious to indicate the charging status to the user (Official Notice). Doing so would have been obvious in order to better communicate to the user when the system has completed charging.

5. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kossin (2002/0003584) in view of Takahashi et al. (5512941), (hereinafter referred to as "Takahashi") in further view of Hopmeyer (5669020).

Regarding claim 28, note the examiners rejection for claims 10 and 38, and in addition Kossin in view of Takahashi disclose "activating internal camera

controls with a user interface" (Kossin: paragraph 0118, wherein the user interface is the shutter actuation interface), "obtaining one or more images with the camera system" (Kossin: paragraph 0126, wherein the images have been previously obtained and are being transferred), "transmitting the images to a controller with a transmission link" (Kossin: paragraph 0126, wherein the controller is the PC, the transmission is the RF link), and "advanced on-screen controls displayed on an internal display" (Takahashi: figures 4 and 11, wherein the on-screen controls is the display as a result of the user's selection to record, or the tape, air, or battery becoming low or empty). However, this apparatus lacks the sealed buttons that control a focus system, shutter, zoom lens, and f-stop settings. Hopmeyer teaches that in prior art camera systems, user's must purchase two housings to use both still and video cameras resulting in bulky and heavy equipment (Hopmeyer: column 1, lines 20-27). To help alleviate this problem, Hopmeyer discloses a housing comprising "sealed buttons that control a focus system, shutter, zoom lens, and f-stop settings" (Hopmeyer: figures 1-2, column 2, lines 3-36, wherein the f-stop setting is the aperture control). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Kossin, add the user interface taught by Takahashi, and add the sealed buttons taught by Hopmeyer in order to obtain an apparatus that takes better quality pictures by providing the user with buttons to control detailed settings.

Art Unit: 2613

6. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kossin (2002/0003584) in view of Zernov et al. (6097424), (hereinafter referred to as "Zernov") in further view of Shepper (5953543).

Regarding claims 40-43, note the examiners rejection for claim 1, and in addition, claims 40-43 differ from claim 1 in that claims 40-43 further require the case to be made of a plurality of materials and vary in thickness. Shepper teaches that camera cases can be made from a plurality of materials varying in thickness from as little as 0.025 mm to a maximum thickness as determined by the materials ability to remain flexible and achieve is intended object (Shepper: column 6, lines 1-20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Kossin, add the varying case thickness taught by Zernov, and add the case materials and thickness taught by Shepper in order to obtain an apparatus that is more versatile by being able to adapt the case to the environmental conditions for which the camera is to be used.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-6642956 11-2003 Safai, Mohammad A.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (703) 305-3418. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2613

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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